**PATENT** 

Attorney Docket No.: AERO1130-4

In re Application of:

Tamburini et al.
Application No.: 09/974,026

Filed: October 10, 2001

Page 2

## Amendments to the claims

Please amend claim 12.

The listing of the claims will replace prior versions, and listings of claims in the application.

## Listing of claims:

## 1-11. (Canceled)

12. (Currently amended) An isolated nucleic acid sequence, wherein the nucleic acid encodes a protein <u>having serine protease inhibitory activity</u>, comprising one of the following amino acid sequences:

ADRERSIHDF CLVSKVVGRC YLTKEECLKK CATVTENATG NYEEYCTANA VTGPCRASFP ACMLRCFRQQ ENPPLPLGSK (SEQ ID NO:52);	DLATSRNAAD RWYFDVERNS	SSVPSAPRRQ	DSEDHSSDMF	50 100 150 170
ADRERSIHDF CLVSKVVGRC YLTKEECLKK CATVTENATG NYEEYCTANA VTGPCRASFP ACMLRCFRQQ ENPPLPLGSK QERALRTVWS SGDDKEQLVK (SEQ ID NO:49);	RASMPRWWYN DLATSRNAAD RWYFDVERNS VVVLAGLFVM	SSVPSAPRRQ CNNFIYGGCR	YGGCDGNSNN DSEDHSSDMF GNKNSYRSEE	-1 50 100 150 200 225
ADRERSIHDF CLVSKVVGRC YLTKEECLKK CATVTENATG NYEEYCTANA VTGPCRASFP ACMLRCFRQQ ENPPLPLGSK QERALRTVWS SGDDKEQLVK (SEQ ID NO:71);	DLATSRNAAD RWYFDVERNS VVVLAGLFVM	SSVPSAPRRQ CNNFIYGGCR	DSEDHSSDMF GNKNSYRSEE	50 100 150 200 225
ADRERSIHDF CLVSKVVGRC YLTKEECLKK CATVTENATG NYEEYCTANA VTGPCRASFP ACMLRCFRQQ ENPPLPLGSK (SEQ ID NO:2)	DLATSRNAAD RWYFDVERNS	VTDGSCQLFV SSVPSAPRRQ	DSEDHSSDMF	-1 50 100 150 179
ADRERSIHDF CLVSKVVGRC YLTKEECLKK CATVTENATG	RASMPRWWYN		YGGCDGNSNN	-1 50 100

**PATENT** Attorney Docket No.: AERO1130-4

In re Application of:
Tamburini et al.
Application No.: 09/974,026
Filed: October 10, 2001

Filed: October 10, 2001 Page 3	
NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE ACMLRCFRQQ ENPPLPLGSK VVVLAGLFVM VLILFLGASM VYLIRVARRN QERALRTVWS SGDDKEQLVK NTYVL (SEQ ID NO:45);	150 200 225
MAQLCGL RRSRAFLALL GSLLLSGVLA ADRERSIHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE ACMLRCFRQQ ENPPLPLGSK VVVLAGLFVM VLILFLGASM VYLIRVARRN QERALRTVWS FGD (SEQ ID NO:47);	-1 50 100 150 200 213
ADRERSIHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE ACMLRCFRQQ ENPPLPLGSK VVVLAGLFVM VLILFLGASM VYLIRVARRN QERALRTVWS FGD (SEQ ID NO:70);	50 100 150 200 213
IHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN YLTKEECLKK CATV (SEQ ID NO:4);	50 64
CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN YLTKEECLKK C (SEQ ID NO:5);	<del>50</del> <del>61</del>
YEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE ACMLRCFRQ (SEQ ID NO:6);	150 159
CTANA VTGPCRASFP-RWYFDVERNS CNNFIYGGCR GNKNSYRSEE  ACMLRC (SEQ ID NO:7);	<del>150</del> <del>156</del>
IHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE ACMLRCFRQ (SEQ ID NO:3);	50 100 150 159
CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE ACMLRC	50 100 150 156

**PATENT** 

Attorney Docket No.: AERO1130-4

In re Application of:

Tamburini et al. Application No.: 09/974,026

Filed: October 10, 2001

Page 4

ADRERSIHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN	50 100
YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF	
NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE	150
ACMLRCFRQQ ENPPLPLGSK VVVLAGAVS	179
(SEQ ID NO:1); and	
ADRERSINDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN	<del>50</del>
THE THE COMMENSATION OF A MICHARD COMPONED DO DO	- 02

ADRERSINDF CLVSKVVGRC RASMPRWWYN VIDGSCQLFV YGGCDGNSNN 50
YLTKEBCLKK CATVIENAIG DLAISRNAAD SSVPSAPRRQ DS 92
(SEQ ID NO:8).

- 13. (Previously presented) The nucleic acid sequence of claim 12, wherein the nucleic acid comprises a sequence selected from SEQ ID NOS: 9, 32, 44, 46, 48, 51 or 75.
- 14. (Previously presented) A self-replicating expression vector, comprising a nucleic acid sequence of claim 12 or 13.
- 15. (Previously presented) The expression vector of claim 14, wherein the expression vector expresses a protein that:
  - (a) is glycosylated; or
  - b) contains at least one intra-chain cysteine-cysteine disulfide bond; or
- (c) is both glycosylated and contains at least one intra-chain cysteine-cysteine disulfide bond.
- 16. (Previously presented) A method of producing a protein encoded by a nucleic acid of claim 12, comprising:
- (a) inserting the nucleic acid into an appropriate protein expression vector by use of a recombinant DNA technology, to create a bikunin expression vector; and
  - (b) subjecting the bikunin expression vector to an appropriate protein expression system.
- 17. (Previously presented) The method of claim 16, wherein the protein:

In re Application of: Tamburini et al.

Attorney Docket No.: AERO1130-4

**PATENT** 

Application No.: 09/974,026 Filed: October 10, 2001

Page 5

(a) is glycosylated;

- (b) contains at least one intra-chain cysteine-cysteine disulfide bond; or
- (c) is both glycosylated and contains at least one intra-chain cysteine-cysteine disulfide bond.